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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,574	03/14/2005	Sebastien Perrot	PF020112	7078

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EXAMINER	
RUTKOWSKI, JEFFREY M	

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,574	PERROT ET AL.	
	Examiner	Art Unit	
	Jeffrey M. Rutkowski	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/14/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Figure 1 of the present application is essentially the same as figure 1 of Straub et al. (US Pat 6,914,895). Both figures depict IEEE 1394 buses interconnected via wireless bridged network.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1, 3, 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (WO 95/12942) in view of Arima (US Pat 6,505,303) and Brown et al. (US Pat 5,606,664), hereinafter referred to as Brown.

7. For **claim 1**, Meier teaches a wireless network containing at least two bridge portals **2, 3** interconnected via spanning tree **[page 40, 1st paragraph and figure 9]**. Figure 9 of Meier also shows other bridge portals **7, 9** are connected to the super root (elected parent portal).

8. Meier does not teach a determination of the number of ports for each device. Arima teaches the number of ports determination limitation absent from the teachings of Meier by disclosing the Institute of Electrical and Electronics Engineers (IEEE) 1394 standard where each communication node sends node information to all connected nodes. Included in the node information is the number of ports of the sending node **[col. 7 lines 14-21]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use IEEE 1394 protocol in Meier's invention to allow the root node to determine the physical topology of the network.

9. Meier teaches a root (parent) bridge is elected amongst multiple root candidates **[page 15 lines 26-32]**. Meier does not teach how the root bridge is elected. Brown teaches the root bridge

election limitation by disclosing a root bridge that is elected according to the number of down port links **[col. 19 lines 41-45]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the number of ports to determine a root in Meier's invention since the root with the largest number of ports would create the most compact spanning tree.

10. For **claim 3**, which depends from **claim 1**, Meier teaches there is only one super root in a spanning tree network **[page 40, figure 9]**.

11. For **claim 6**, which depends from **claim 1**, Meier teaches spanning tree eliminates loops (invalid topology) in the physical topology of the network **[page 40, 1st paragraph]**. Therefore, any connection that created a loop in the network would not be accepted.

12. For **claim 7**, which depends from **claim 1**, Meier teaches if a parent cannot contact a child node, the parent node marks a table entry for the child node as UNATTACHED, adds an alert for the child to node to an alert list (failure cause of a portal to a parent portal) and sends an alert request to the super root **[page 45, 2nd paragraph]**.

13. For **claim 8**, which depends from **claim 1**, Meier teaches a root (parent) bridge is elected amongst multiple root candidates **[page 15 lines 26-32]**. Meier does not teach how the root bridge is elected. Brown teaches the root bridge election limitation by disclosing a root bridge that is elected according to the number of down port links **[col. 19 lines 41-45]**. Meier's spanning tree network does not include the distribution LAN or the remote station **1 [page 40, 1st paragraph and figure 9]**. Given that Meier teaches the spanning tree is created amongst wireless nodes (virtual ports), it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the wireless node with the highest number of virtual ports to as

a root in Meier's invention since the root with the largest number of ports would create the most compact spanning tree.

14. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier in view of Arima and Brown as applied to **claim 1** above, and further in view of the Specification of the present application, hereinafter referred to as the admission.

15. For **claim 2**, which depends from **claim 1**, Meier teaches each node stores and modifies information that determines how traffic flows in the network **[page 15, lines 20-25]** (configurable number of virtual and physical ports). For example, if a loop occurs in the wireless network, the Spanning Tree Protocol (STP) will eliminate the loop by disabling one of the virtual ports, thereby reducing the number of ports. Meier does not teach a predefined number of ports. The admission teaches the predefined number of ports limitation absent from the teachings of Meier by disclosing the IEEE 1394 standard only allows up to 16 ports on a given node **[page 6, lines 1-2]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a predefined number of ports in Meier's invention to make sure a node does not run out of memory by trying to service too many ports.

16. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier in view of Arima and Brown as applied to **claim 1** above, and further in view of IEEE Standard 802.1w.

17. For **claim 4**, which depends from **claim 1**, the combination of Meier, Brown and Arima do not teach a new root (parent) bridge is elected when a new bridge portal is ATTACHED to the spanning tree network. The IEEE Standard 802.1w teaches the election of a new root (parent) bridge absent from the teachings of Meier, Brown and Arima by disclosing adding a new bridge to a spanning tree can result in the changing of port roles in all or part of a network

[page 35, final paragraph]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to elect a new root (parent) bridge in Meier's invention since the new bridge may have better connectivity (i.e. access to more bandwidth) than the previous root bridge.

18. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier in view of Arima, Brown and IEEE Standard 802.1w as applied to **claim 4** above, and further in view of Moriya (US Pg Pub 2002/0027887).

19. For **claim 5**, which depends from **claim 4**, Meier teaches new nodes are added to the spanning tree network once a super root has been elected **[page 40, 2nd paragraph]**. Meier does not teach verifying a free virtual port. Moriya teaches the free port verification limitation absent from the teachings of Meier by disclosing a health check function that checks to see if other nodes are connected to an unused port **[0077]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention verify an open port in Meier's invention to make sure the bridge has enough resources to handle the new portal.

20. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (WO 95/12942) in view of Brown.

21. For **claim 9**, Meier teaches a Wireless Domain Access Point (WDAP) that serves as a bridge between a wired and wireless network **[page 9, lines 10-11]**. Each node in the network maintains a spanning tree routing table that maintains the topology of the network (means for managing ports) **[page 16, lines 14-26]**.

22. Meier does not teach an election process according to the number of free ports. Brown teaches the election process limitation by disclosing a root bridge that is elected according to the number of down port links **[col. 19 lines 41-45]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the number of ports to determine a root in Meier's invention since the root with the largest number of ports would create the most compact spanning tree.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey M. Rutkowski whose telephone number is (571) 270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
11/29/2007

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